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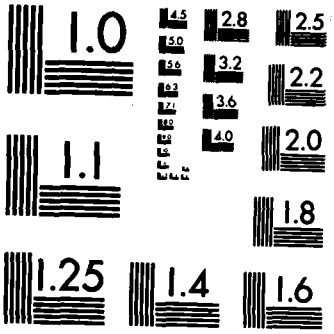

FTD-ID(RS)T-1775-82

# FOREIGN TECHNOLOGY DIVISION

DATA TRANSMISSION SYSTEMS



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# EDITED TRANSLATION

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DATA TRANSMISSION SYSTEMS

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## U. S. BOARD ON GEOGRAPHIC NAMES TRANSLITERATION SYSTEM

| Block | Italic | Transliteration | Block | Italic | Transliteration |
|---|---|---|---|---|---|
| А а | *А а* | A, a | Р р | *Р р* | R, r |
| Б б | *Б б* | B, b | С с | *С с* | S, s |
| В в | *В в* | V, v | Т т | *Т т* | T, t |
| Г г | *Г г* | G, g | У у | *У у* | U, u |
| Д д | *Д д* | D, d | Ф ф | *Ф ф* | F, f |
| Е е | *Е е* | Ye, ye; E, e* | Х х | *Х х* | Kh, kh |
| Ж ж | *Ж ж* | Zh, zh | Ц ц | *Ц ц* | Ts, ts |
| З з | *З з* | Z, z | Ч ч | *Ч ч* | Ch, ch |
| И и | *И и* | I, i | Ш ш | *Ш ш* | Sh, sh |
| Й й | *Й й* | Y, y | Щ щ | *Щ щ* | Shch, shch |
| К к | *К к* | K, k | Ъ ъ | *Ъ ъ* | " |
| Л л | *Л л* | L, l | Ы ы | *Ы ы* | Y, y |
| М м | *М м* | M, m | Ь ь | *Ь ь* | ' |
| Н н | *Н н* | N, n | Э э | *Э э* | E, e |
| О о | *О о* | O, o | Ю ю | *Ю ю* | Yu, yu |
| П п | *П п* | P, p | Я я | *Я я* | Ya, ya |

*ye initially, after vowels, and after ъ, ь; e elsewhere.
When written as ё in Russian, transliterate as yё or ё.

## RUSSIAN AND ENGLISH TRIGONOMETRIC FUNCTIONS

| Russian | English | Russian | English | Russian | English |
|---|---|---|---|---|---|
| sin | sin | sh | sinh | arc sh | $\sinh^{-1}$ |
| cos | cos | ch | cosh | arc ch | $\cosh^{-1}$ |
| tg | tan | th | tanh | arc th | $\tanh^{-1}$ |
| ctg | cot | cth | coth | arc cth | $\coth^{-1}$ |
| sec | sec | sch | sech | arc sch | $\operatorname{sech}^{-1}$ |
| cosec | csc | csch | csch | arc csch | $\operatorname{csch}^{-1}$ |

| Russian | English |
|---|---|
| rot | curl |
| lg | log |

## GRAPHICS DISCLAIMER

**All figures, graphics, tables, equations, etc. merged into this translation were extracted from the best quality copy available.**

GOST 17422-72

# DATA TRANSMISSION SYSTEMS

## Speeds of transmission and types of noise-suppressing codes for transmission with a narrow-band feedback channel

By decree of the State Standards Committee of the Council of Ministers of the USSR of 7/1 1972 No 59 the period of implementation is eastablished as

from 1/1 1973.

Nonobservance of the standard is punishable by law.

1. The present standard establishes the nominal speeds of transmission of data over telegraph channels, audio frequency channels, wide-band channels, and short-wave radio channels, and also the types of noise-suppressing codes for data transmission systems based on the standard channels of audio frequency by the synchronous method with a narrow-band feedback channel.

The standard takes into account the requirements of the SEV [Council for Mutual Economic Aid] recommendation for standardization RS 2344-70.

2. The standard does not extend to speeds of transmission of data on the input (output) of parallel devices for signal conversion.

3. The nominal rate of transmission of data on the input (output) of signal conversion devices to the side of equipment for data processing should be selected:

a) for telegraph channels - from the series 50, 100, 200 bit/s.

A speed of 75 bit/s is permitted;

b) for audio frequency channels - from the series 200, 600, 1200, 2400, 3600, 4800, 7200, 9600 bit/s. When a feedback channel is used a speed of 75 bit/s is permitted;

c) for wide-band channels:

pregroup - from the series 6000, 12000, 24000 bit/s;

primary group - from the series 24000, 48000, 96000 bit/s. A rate of 72000 bit/s is permitted;

d) for short-wave radio channels:

telegraph - from the series 50, 100, 200 bit/s. Rates of 75, 150 and 300 bit/s are permitted;

audio frequency - from the series 200, 600, 1200, 2400, 4800 bit/s. A speed of 3600 bit/s is permitted.

4. For short-wave channels, when data transmission systems which use a start-stop printing device and operate by the MTK-2 code are joined with a wire network, it is permitted to select the rate of transmission from the series 48, 96, 192 bit/s.

5. In systems of synchronous transmission of data with decision feedback on a narrow-band feedback channel in the case of protection from errors independent of the primary code for rates of 600, 1200, 2400, 3600 and 4800 bit/s types of noise-suppressing cyclic codes with the following parameters should be used:

length of block - 140, 260, 500 or 980 binary elements;

generating polynomial - $x^{16}+x^{12}+x^5+1$.

The following structure of the block is established:

four service elements;

120, 240, 480 or 960 information elements;

16 verifying elements, corresponding to the generating polynomial $x^{16}+x^{12}+x^5+1$.

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